

The Video Synthesizer: Exploring a Lost History of Electronic Animation

In the mid-1960s, a generation of artists looking for new languages of self-expression and eager to explore the exciting new technologies of the time began to discover video as a medium for their work. Compared to celluloid film, video offered an immediacy, accessibility and malleability that was otherwise absent from traditional filmmaking. Video cameras were cheap compared to their film equivalents, and could be connected directly to a TV set, allowing the captured image to be viewed instantaneously as well as the possibility for feedback loops between the camera and screen, opening up whole new methods of creativity.

Video, as a stream of electronic signals through wire, also held other benefits for creative experimentation: With some care, video signals could be mixed with each other, or even with signals from any other electronic source, and fed back into video equipment in ways it wasn't originally designed for. This soon led artists to begin exploring the aesthetic possibilities of modifying TVs and video appliances for creative purposes, and eventually to dreaming of how they might better control such experiments and the images they produced. Thus was born the concept of the video synthesizer, a device that could alter and generate video images with precision and be used to take complete control over their colour and form. As video artist Nam June Paik declared in 1974, the video synthesizer would enable an artist to:

“shape the TV screen canvas
as precisely as Leonardo
as freely as Picasso
as colourfully as Renoir
as profoundly as Mondrian
as violently as Pollock and
as lyrically as Jasper Johns.” (1)

Paik, however, was not the first artist to dream of creating electronic images with the ease and freedom of paint on canvas. Mary Ellen Bute, a trained painter, began working with oscilloscopes in the early 1950s in the hope of taking greater control over the animation process in her abstract films, which she had previously been making by hand.

Describing her experience with the oscilloscope, she wrote:

“The creative possibilities are limitless. By changing and controlling the electrical inputs in the 'scope an infinite variety of forms can be made to move...and be combined or altered at will...

The figures and forms on the oscilloscope can be made to move on the horizontal and vertical planes, toward or away from the spectator; their shapes can be varied as much and as often as one pleases” (2)

Bute's ambitions were later echoed in the work of engineer Lee Harrison III, whose invention, the Animac, manipulated cathode rays with enough speed and detail to create fully animated characters and text. He would later win an Emmy for the Animac's successor, the Scanimate,

a more complex video synthesizer, able to create motion graphics quickly and cheaply enough to be viable for the television industry. Thanks to the Scanimate, motion graphics began to appear in everyday TV shows by the early 1970s, with creatives like Jim Henson quickly jumping on the new technology.

As the aesthetics of video synthesis entered pop culture, a new wave of artists began designing and improvising with their own video inventions, including Nam June Paik's 'Paik/Abe Synthesizer', Stephen Beck's 'Direct Video Synthesizer', Bill Etra's 'Rutt/Etra Video Synthesizer', Dan Sandin's 'Image Processor' and Bill Sebastian's 'Outer Space Visual Communicator', while other artists managed to access and experiment with video synthesizers via institutions and residency programmes.

Through a programme of specially chosen films spanning almost three decades, many of which have rarely been shown on cinema screen, we will illuminate the video synthesizer's role in modern moving image history and reveal some of its most significant artistic achievements.

(1) Nam June Paik, Catalogue for exhibition 'Videa 'n' Videology 1959-1973', Everson Museum of Art, New York, 1974

(2) Mary Ellen Bute, "Abstronics: An Experimental Filmmaker Photographs The Esthetics of the Oscillograph", Films in Review Vol. 5, No. 6, 1954